

REMARKS

Applicant is in receipt of the Office Action mailed September 9, 2002. Claims 14-21 were allowed. Claims 23-45 and 49-50 were rejected under §112. Claims 34, 37-47, and 51-58 were rejected under §102 or §103.

§112 Rejections

Claims 23-45 and 49-50 were rejected under §112 because the phrase “just in time manner” was not defined. Applicant has amended various of the claims to remove the phrase “in a just in time manner”. For example, claims 23 and 24 have been amended to delete the phrase “in a just in time manner” and to replace this phrase with “as said blocks are required by said decompress pipelines.” Claims 49 and 50 have been amended in a manner similar to claims 23 and 24. Claims 34 and 36 have been amended to delete the phrase “in a just in time manner” and to replace this phrase with “as said blocks are required by said decompress pipelines.” Thus, Applicant submits that the rejection has been overcome. Applicant thus submits that claims 23 – 33 are allowable.

§102 Rejections

Claims 34, 37 and 51 were rejected under §102 as being anticipated by Koss et al. Claims 38-47 and 52-58 were rejected under §103 as being unpatentable over Koss in view of Rossin et al. These rejections are respectfully traversed.

The Koss et al. patent describes a graphics system including a distributor 30 and multiple geometry accelerators 32. The geometry accelerators operate whereby calculations for shared vertices and shared edges of primitives are performed only once.

The Office Action states that Koss teaches “wherein each block comprises compressed vertex information” citing column 4 lines 16-21. However, this cited portion of Koss has nothing to do with any type of geometry data or vertex data compression. Rather, this cited portion merely refers to the standard method of representing primitives using vertex information. The Koss patent teaches that standard vertex data or geometry data (e.g., position information, color information, etc.) is generated, and then primitives are assembled from this standard vertex data. In contrast, the present application

describes a system where compressed geometry data (or compressed vertex information) is generated, and decompress pipelines operate to decompress this compressed vertex information to produce a plurality of vertices. This decompressed vertex information (plurality of vertices) may then be used to assemble primitives. Thus Koss does not teach or suggest this feature of the claims. In fact, the words “compress” and “decompress” do not appear at all in the Koss patent specification.

The Office Action refers to the geometry accelerators 32 A-C to teach the “plurality of decompress pipelines.” However, as noted above, the Koss et al. patent does not teach or suggest the concept of compressed geometry data. The geometry accelerators 32A-C and 34 taught in the Koss patent perform standard geometry acceleration functions, such as interpolation, texture mapping, lighting and rendering. However, the Koss patent does not teach or suggest compression of 3D geometry data. Thus, Applicant submits that the Koss patent does not teach a plurality of decompress pipelines as recited in the present claims.

Claim 34 further recites “wherein said plurality of decompressed pipelines are configured to decompress said blocks into a plurality of vertices.” The Koss et al. reference does not teach the concept of decompress pipelines or decompression operation which decompresses blocks into a plurality of vertices. The Office Action states that this element is taught by the “resulting data after decomposition”. However, the Koss et al. reference simply does not teach decompression of blocks into a plurality of vertices as recited in claim 34. Rather Koss teaches that vertex information is transmitted uncompressed and is used to assemble primitives such as quadrilaterals or triangles. Koss further teaches various standard graphics operations such as decomposing quadrilaterals into triangles, lighting clipping and plane equation operations, texture mapping, etc.

Therefore, Koss does not teach any type of generation of compressed vertex information or decompression of blocks comprising compressed vertex information into a plurality of vertices. Koss further does not teach decompress pipelines for decompression of blocks of compressed vertex information. Thus, Applicant submits that the rejected claims are allowable over the cited references.

CONCLUSION

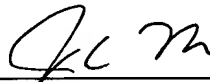
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5181-27800/JCH.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Request for Approval of Drawing Changes
- ☐ Notice of Change of Address
- ☐ Check in the amount of \$ for fees ().
- ☐ Other:

Respectfully submitted,



Jeffrey C. Hood
Reg. No. 35,198
ATTORNEY FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert & Goetzel PC
P.O. Box 398
Austin, Texas 78767-0398
(512) 853-8800

Date: 6/17/2003

CLEAN VERSION OF AMENDED CLAIMS

23. (Amended) A graphics system comprising:

a control unit configured to receive compressed 3D geometry data, wherein said compressed 3D geometry data comprises a plurality of blocks; and

a plurality of decompress pipelines, wherein said control unit is configured to selectively route said blocks to one or more of said decompress pipelines, wherein each block comprises compressed vertex information, wherein said plurality of decompress pipelines are configured to decompress said blocks into a plurality of vertices, wherein said decompress pipelines are configured to cache said blocks of compressed vertex information to a memory, and wherein said decompress pipelines are further configured to retrieve said cached blocks of compressed vertex information from said memory as said blocks are required by said decompress pipelines.

24. (Amended) The graphics system as recited in claim 23, wherein said control unit is configured to route said blocks to said one or more of said decompress pipelines as said blocks are required by said decompress pipelines.

34. (Amended) A graphics system comprising:

a control unit configured to receive compressed 3D geometry data, wherein said compressed 3D geometry data comprises a plurality of blocks; and

a plurality of decompress pipelines, wherein said control unit is configured to selectively route said blocks to one or more of said decompress pipelines, wherein each block comprises compressed vertex information, wherein said plurality of decompress pipelines are configured to decompress said blocks into a plurality of vertices;

wherein said control unit is configured to route said blocks to said one or more of said decompress pipelines when said blocks are to be decompressed.

36. (Amended) The graphics system as recited in claim 35,